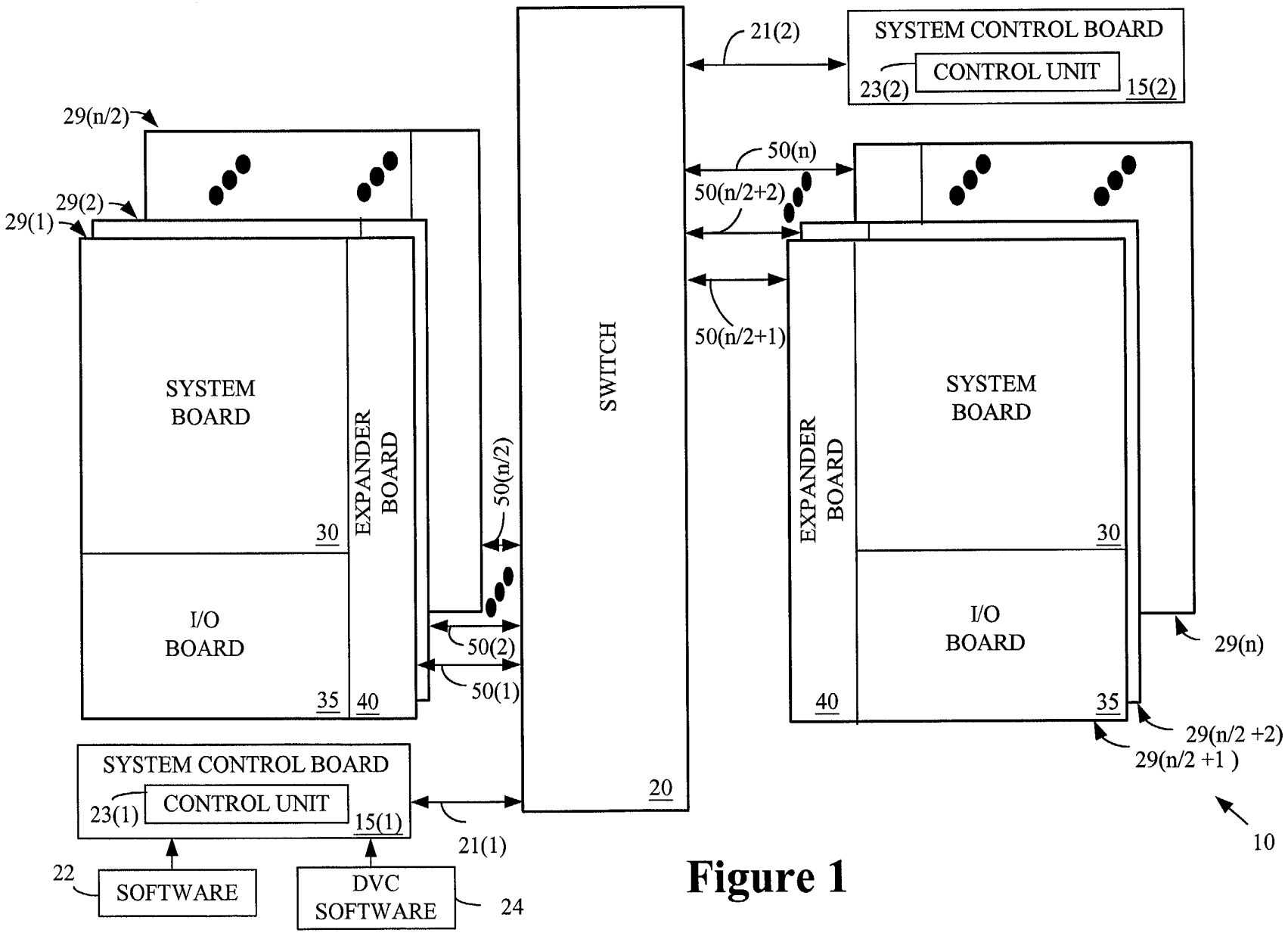

SYSTEM CONTROL BOARD
CONTROL UNIT
23(2)
15(2)
21(2)
29(n/2)
29(2)
29(1)
50(n)
50(n/2+2)
50(n/2+1)
SWITCH
SYSTEM BOARD
EXPANDER BOARD
I/O BOARD
30
35
40
50(n/2)
50(2)
50(1)
29(n)
29(n/2 +2)
29(n/2 +1)
SYSTEM CONTROL BOARD
CONTROL UNIT
23(1)
15(1)
20
21(1)
10
22
SOFTWARE
DVC SOFTWARE
24

Figure 1

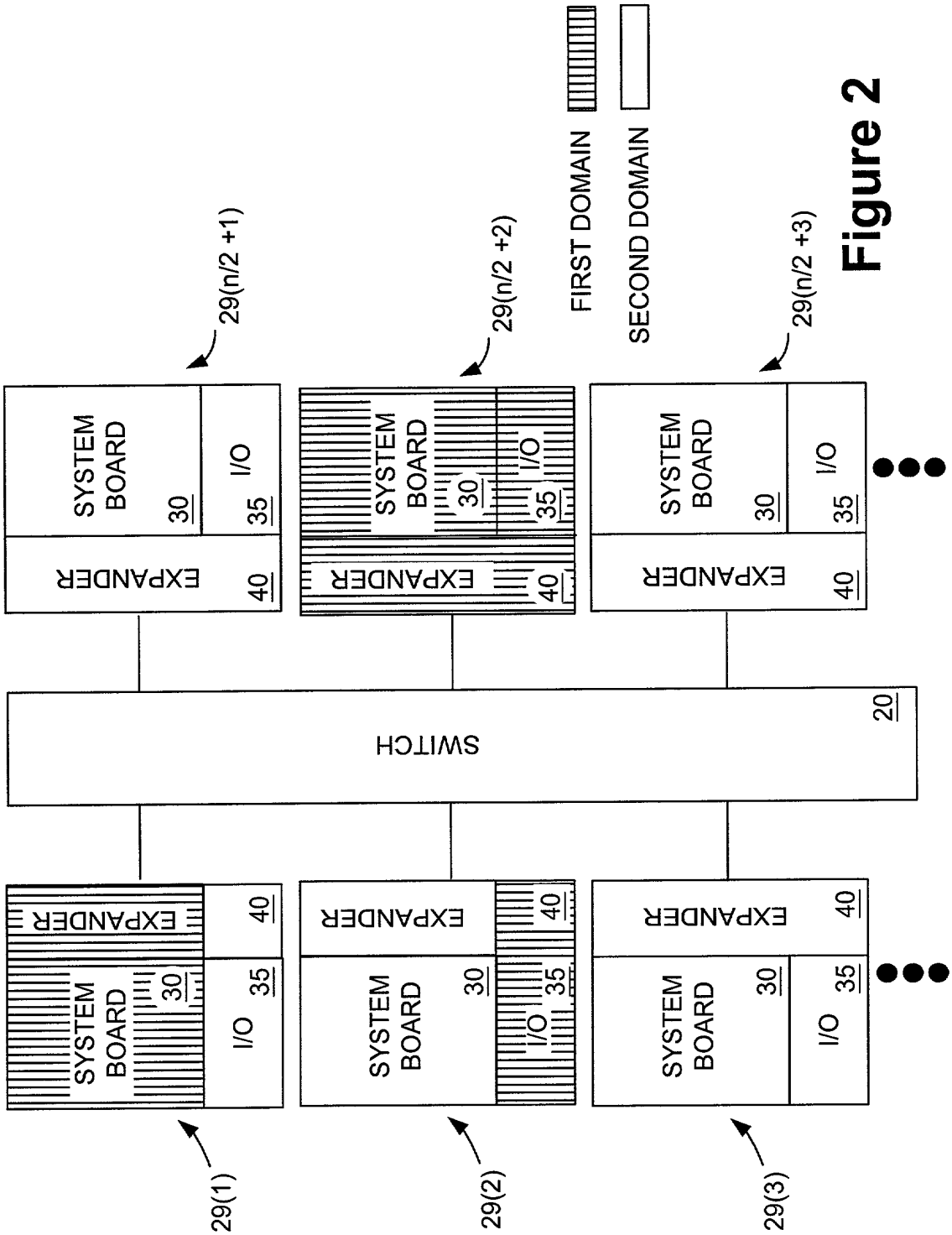

FIRST DOMAIN
SECOND DOMAIN
29(n/2 +1)
29(n/2 +2)
29(n/2 +3)
SYSTEM BOARD
30
I/O
35
EXPANDER
40
SWITCH
20
29(1)
29(2)
29(3)

Figure 2

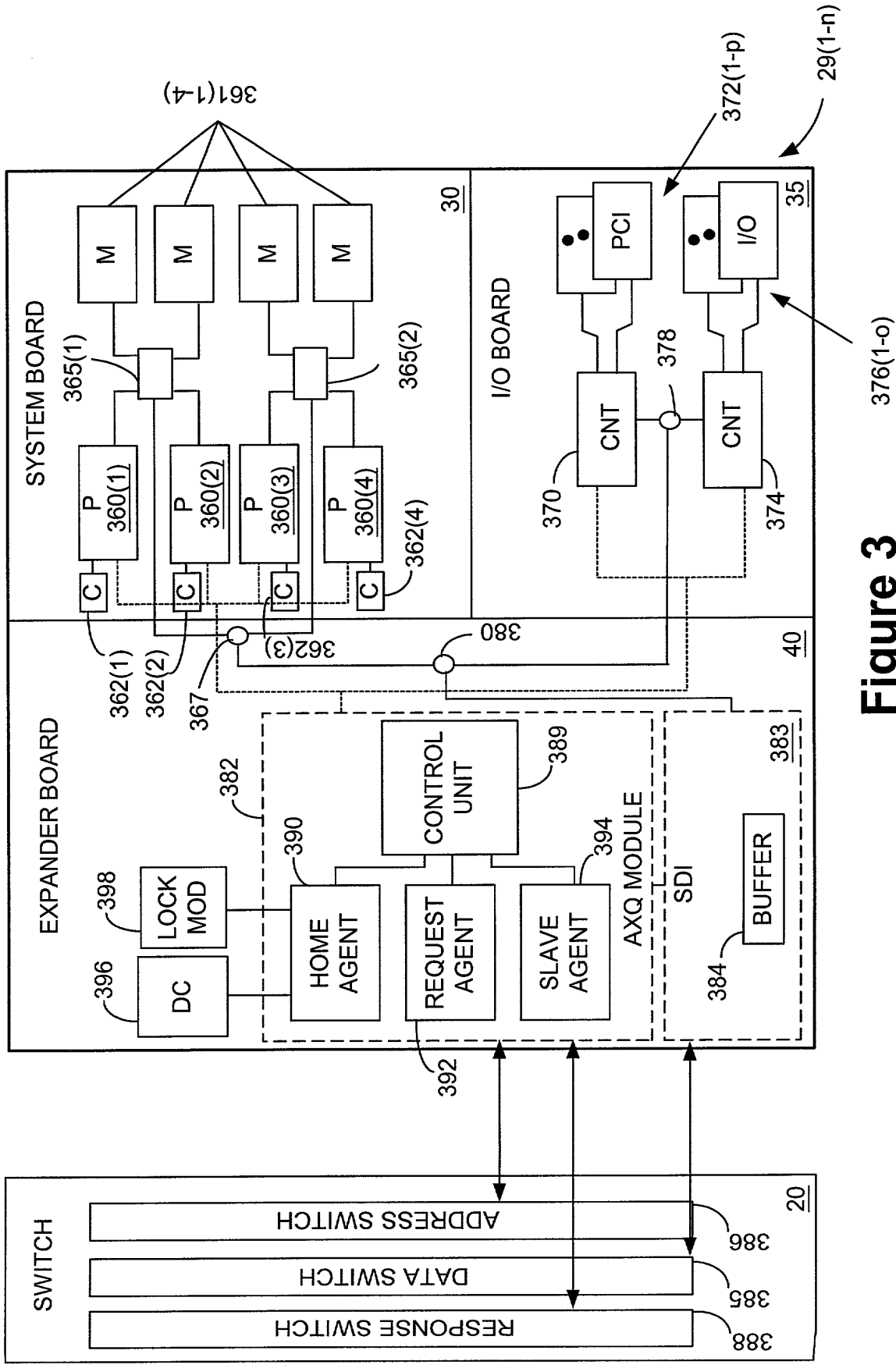
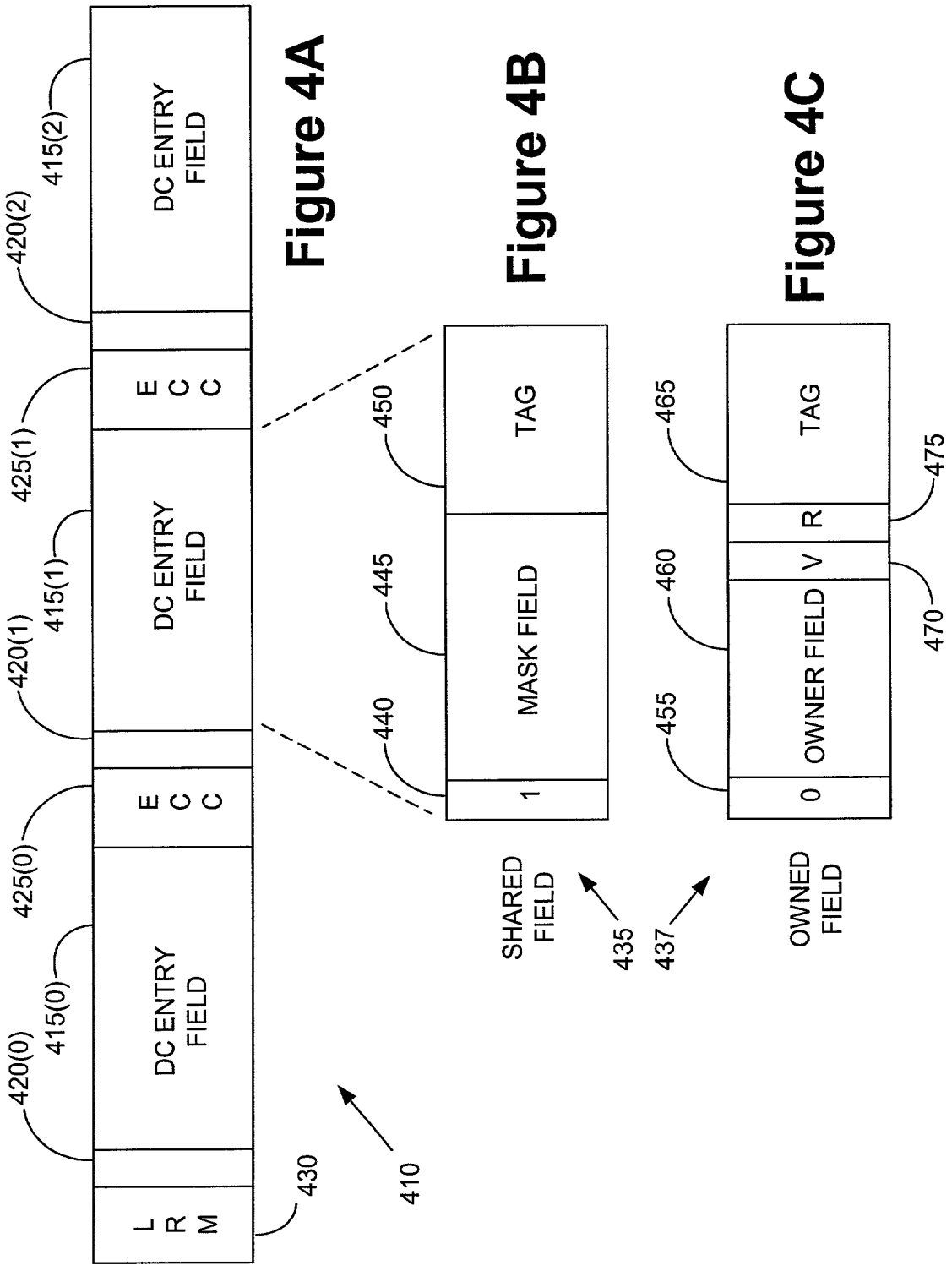

SWITCH
20
ADDRESS SWITCH
386
DATA SWITCH
385
RESPONSE SWITCH
388
EXPANDER BOARD
40
382
CONTROL UNIT
389
390
HOME AGENT
REQUEST AGENT
394
SLAVE AGENT
AXQ MODULE
SDI
383
BUFFER
384
LOCK MOD
398
DC
396
392
362(1)
362(2)
362(3)
362(4)
367
380
SYSTEM BOARD
30
M
365(1)
365(2)
P 360(1)
P 360(2)
P 360(3)
P 360(4)
C
361(1-4)
I/O BOARD
35
PCI
I/O
CNT
370
378
374
372(1-p)
29(1-n)
376(1-o)

Figure 3


L
R
M
430
410
420(0)
415(0)
DC ENTRY FIELD
425(0)
E
C
C
420(1)
415(1)
DC ENTRY FIELD
425(1)
E
C
C
420(2)
415(2)
DC ENTRY FIELD
Figure 4A
SHARED FIELD
435
440
445
MASK FIELD
1
450
TAG
Figure 4B
OWNED FIELD
437
455
460
OWNER FIELD
0
V
R
465
TAG
470
475
Figure 4C

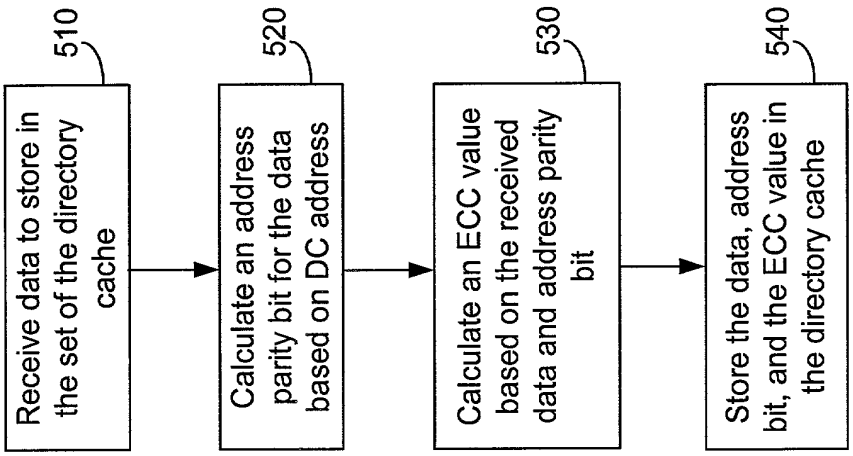

510
Receive data to store in the set of the directory cache
520
Calculate an address parity bit for the data based on DC address
530
Calculate an ECC value based on the received data and address parity bit
540
Store the data, address bit, and the ECC value in the directory cache

Figure 5

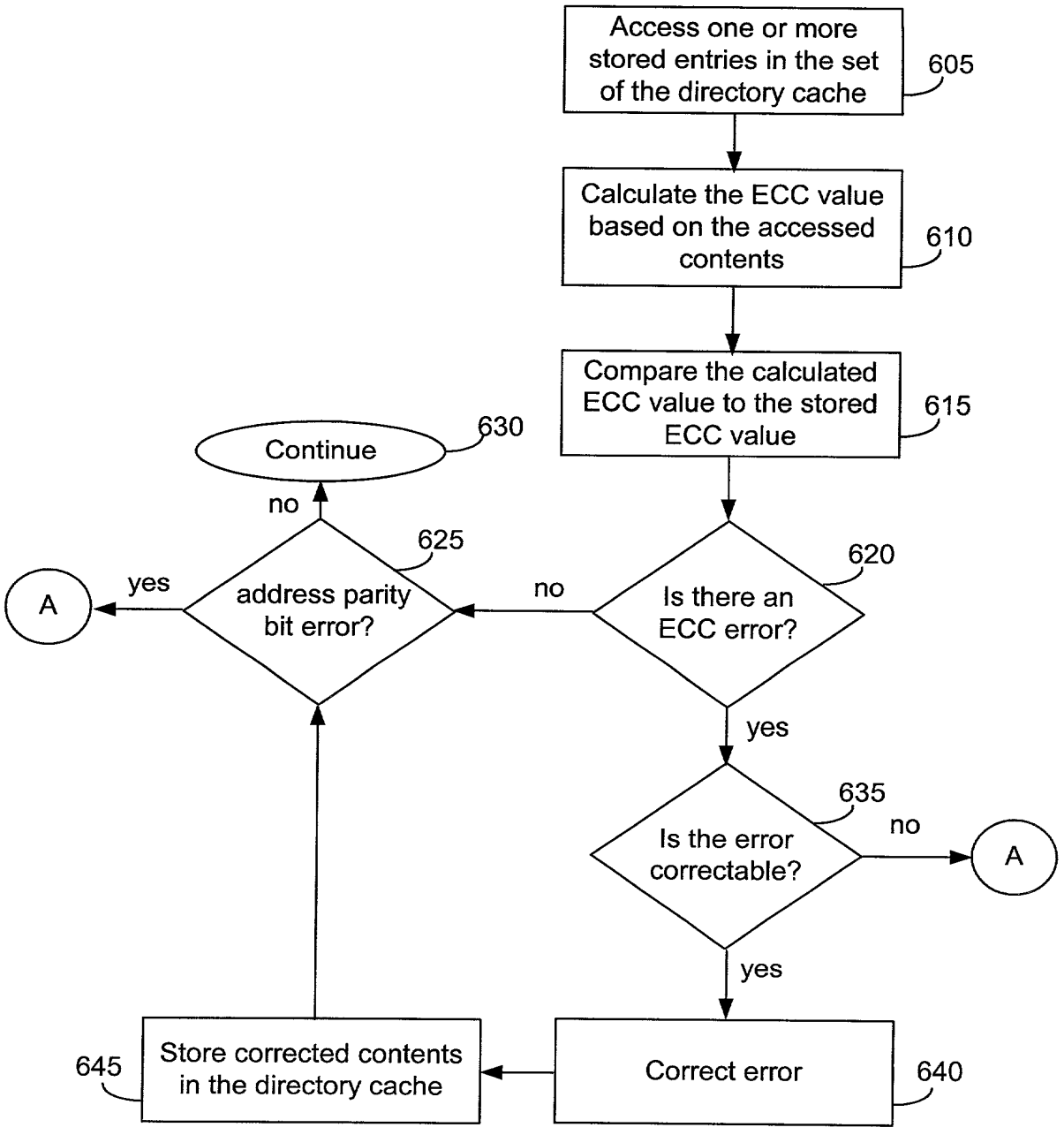

Access one or more stored entries in the set of the directory cache
605
Calculate the ECC value based on the accessed contents
610
Compare the calculated ECC value to the stored ECC value
615
Is there an ECC error?
620
no
address parity bit error?
625
yes
A
no
Continue
630
yes
Is the error correctable?
635
no
A
yes
Correct error
640
Store corrected contents in the directory cache
645

Figure 6A

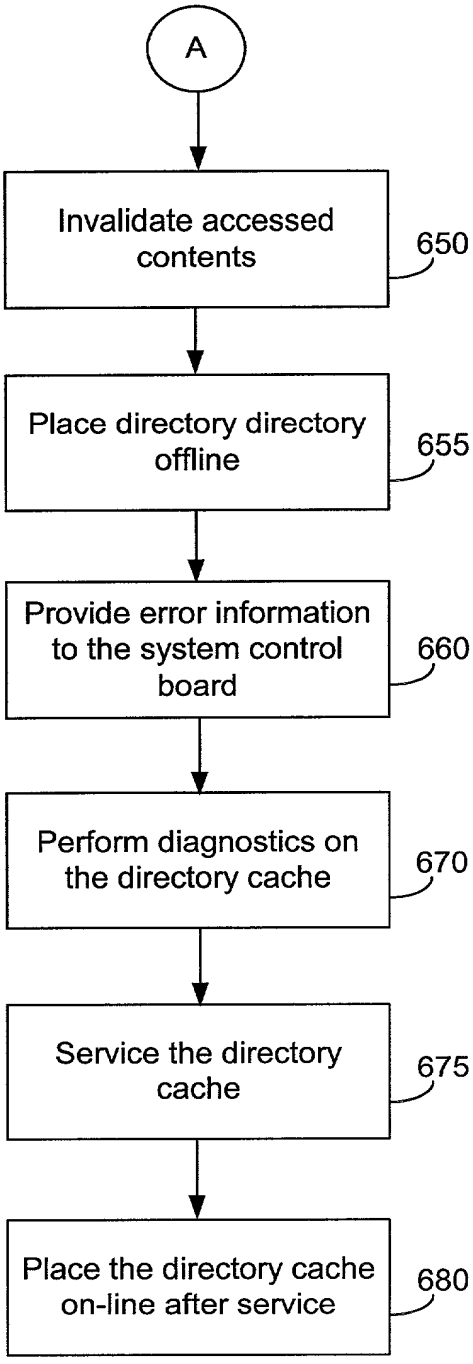


Figure 6B

Replacement Sheet